

SUMMARY INFORMATION PAGE

FUNDING OPPORTUNITY NUMBER AND FON

2. Trash Removal from Great Lakes Rivermouths and Harbors (EPA-R5-GL2020-TFH)

PROJECT TITLE

Kinnickinnic River Trash Collector

APPLICANT INFORMATION

Harbor District, Inc.
600 E Greenfield Ave
Milwaukee, WI. 53204

TYPE OF ORGANIZATION

7. Not for Profit/Non-profit

PROPOSED FUNDING REQUEST

\$492,300

PROJECT DURATION

9/1/2020-8/31/2022

BRIEF PROJECT DESCRIPTION

This project will construct and install a trash interceptor near the mouth of the Kinnickinnic River in Milwaukee's Inner Harbor. The 9.5-mile Kinnickinnic drains a highly urbanized 16,000-acre watershed. The device will use solar energy to power conveyor belts that will carry trash to a dumpster on land. Floating booms will capture and direct trash to the collector while allowing paddlers to pass. The device will be supported by community education efforts around the impact of trash and plastics and be a symbol of Milwaukee's commitment to clean water.

PROJECT LOCATION

Hydrologic Unit Code – 04040003
Lat 43.00 Long -87.91
Milwaukee, WI 53204
Wisconsin Congressional District 4

2. WORK PLAN

ACRONYMS:

AOC	Area of Concern
BID	Business Improvement District 51
DPW	City of Milwaukee Department of Public Works
HDI	Harbor District, Inc.
MMSD	Milwaukee Metropolitan Sewerage District
MRK	Milwaukee Riverkeeper
SSCHC	Sixteenth Street Community Health Center

PROJECT DESIGN

Lead Organization and Partners

Harbor District, Inc (HDI) was founded in 2014 to achieve a world-class revitalization of Milwaukee's harbor that sets the standard for how waterfronts work — economically, environmentally, and socially — for the next century. The organization works to drive redevelopment of our underutilized working waterfront in order to achieve broad-based social benefits and environmental and ecological improvements. We bring together government agencies, businesses, property owners, and local residents to identify common goals and work toward their implementation.

For this project, HDI will bring together several local partners:

- Milwaukee Metropolitan Sewerage District (MMSD): Regional government agency providing water reclamation and flood management services in the Greater Milwaukee area.
- City of Milwaukee Department of Public Works (DPW): City agency responsible for infrastructure, residential garbage removal.
- Milwaukee Riverkeeper (MRK): Non-profit organization providing science-based education, monitoring, and advocacy for Milwaukee's Rivers.
- Sixteenth Street Community Health Centers (SSCHC): Non-profit clinic providing health care as well as programming around environmental health impacts in our local community.
- Business Improvement District #51 (BID): Special taxing authority of commercial property owners within the immediate area. An annual fee is assessed to each property that they collectively direct toward improving their area.

Kinnickinnic River and Surrounding Community

The Kinnickinnic River is the most challenged watershed in Milwaukee, receiving the lowest grade in Milwaukee Riverkeeper's annual Report Card due to its turbidity and high concentrations of phosphorus, chloride, and bacteria. Legacy contamination in the river results in fish consumption advisories. It was featured in a 2009 book called "Don't Go There!" by the *Today Show* travel editor.

In addition to poor water quality, the Kinnickinnic has a major trash problem. During wet weather events, garbage washes into the river, where it flows downstream and often collects on vegetation and dock structures, in addition to being carried into Lake Michigan. This trash impacts the aquatic habitat in the Kinnickinnic River and Lake Michigan as it accumulates,

altering light and oxygen levels. Changes to these conditions decrease the habitat's ability to support life. Aquatic plastic trash has been found to have harmful chemical effects associated with persistent bioaccumulative toxins, like PCBs and pesticides. These chemicals can accumulate on plastics, concentrating at levels orders of magnitude higher than the surrounding environment. The high concentration of these chemicals is very harmful to animal and human health.

The mainstem of the Kinnickinnic river is 10 miles long and drains a 16,000 acre (25 square mile) watershed. The trash collector's installation site is located 2 miles upstream of Lake Michigan. This watershed is almost entirely developed, urban land. Around 150,000 people live within the Kinnickinnic watershed, making it one of the most densely populated in the region. EPA's EJSCREEN tool provided the following demographic information for residents within one mile of installation site:

Demographic Variable	One Mile Radius	State Average	Region 5 Ave.
Approximate Population	31,539		
Demographic Index	69%	24%	28%
Minority Population	73%	18%	25%
Low Income Population	65%	29%	31%
Linguistically Isolated	14%	2%	2%
Less than HS Education	34%	8%	10%

Figure 1: Demographics of surrounding neighborhood

The area within one mile of the installation site also had high scores for all of the Environmental Justice indexes listed in EJSCREEN. All eleven were above the 90th percentile for the state and all but two were also above the 90th percentile for the region.

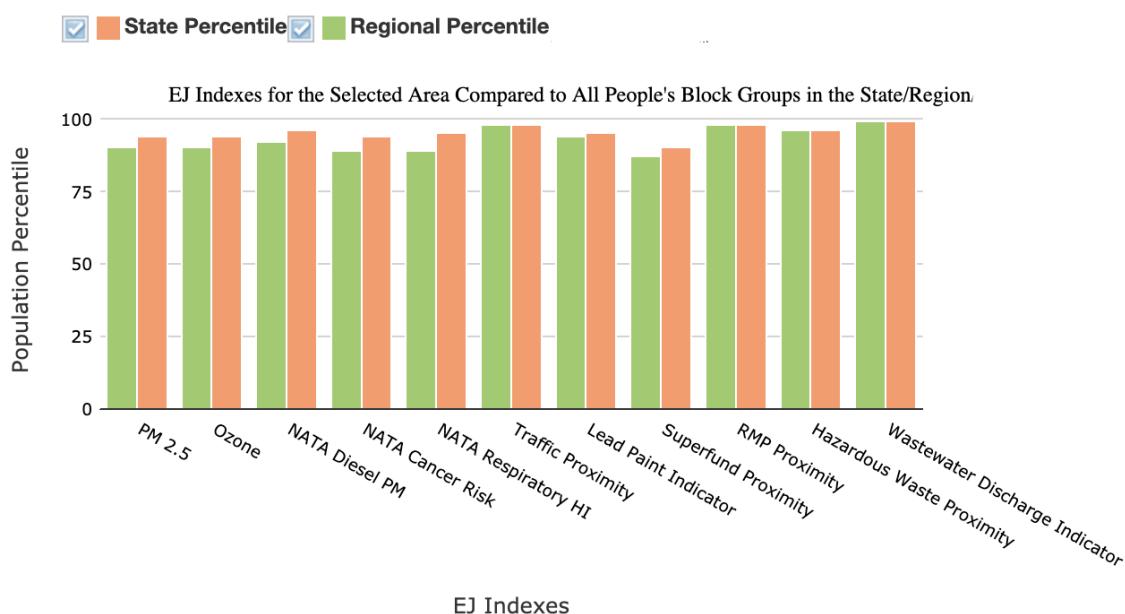


Figure 2: Environmental Justice Indexes

Milwaukee is in the midst of planning contaminated sediment cleanup and habitat restoration as part of the EPA Area of Concern program. This is vital work to make our waterways cleaner and safer, but it is a difficult concept for many community members to grasp. They can see neither the problem, nor the result of contaminated sediment cleanups. A trash collector is a prominent, tangible symbol that will embody our commitment to care for our water. It will also address one of the most visible kinds of pollution. Locating the device on the Kinnickinnic River rather than the other two larger rivers in the city (the Milwaukee and Menomonee) demonstrates our commitment to this often overlooked watershed.

Trash Removal in Milwaukee

Milwaukee has already made a significant commitment to keeping its waterways free of trash. MMSD, in partnership with the City of Milwaukee, Port Milwaukee, and Veolia, owns and operates the Lynyrd Skymmr, a skimmer vessel that travels our waterways collecting 1,200-1,500 cubic yards of trash each year. This partnership makes a major dent in the trash moving through our estuary, but we know there is a lot left to do. A single boat cannot possibly cover all the territory of the Milwaukee estuary, or run down every foam coffee cup. More significantly, safety concerns for the crew prevent the skimmer from operating during or immediately after storms - precisely when the majority of trash is being washed into the river. At HDI, we hear from local property owners - and see for ourselves from our offices at the mouth of the Kinnickinnic river - how much trash is still moving out to Lake Michigan.

When we became aware of the “Mr. Trash Wheel” device operating in Baltimore’s Inner Harbor, we thought that a similar stationary, unmanned trash collector would be a fantastic addition to Milwaukee’s waterways.

Installation of a Trash Interceptor in the Kinnickinnic River

Our proposal is to install and operate a stationary trash collection device in the Kinnickinnic River at a location near the river mouth, and to support that device with public outreach and education about trash and water quality.

Effective Collection of All Floating Trash: The device will be docked to several spud anchors driven into the river bottom, which will allow it to move with changing water levels. Floating booms will direct the flow of trash to the device, while allowing paddlers to pass. Types of trash to be removed include floating post-consumer material like plastic bottles, plastic bags, bits of Styrofoam, and ever-present cigarillo wrappers. The device will also collect small and medium-sized floating woody debris. A conveyor system will move trash from the collection device in the river to a dumpster on land for easy removal.

Two Options to Acquire a Proven Technology: HDI has received proposals from two firms that are capable of constructing the device, with slightly different approaches. The first company is Clearwater Mills, LLC, which designed, built, and installed Mr. Trash Wheel in Baltimore, Maryland. Since their first trash wheel, the company has built and installed two more in Baltimore, and is working with several other cities to install trash collection devices. Clearwater Mills has proposed their water wheel driven system for installation in Milwaukee.

The second firm is Aquarius Systems, located in North Prairie, Wisconsin. Aquarius has been building aquatic weed harvesting and trash collection equipment since the 1950's. Their customer base includes nearly 50 countries - as well as Milwaukee, where they built the Lynyrd Skymmr trash skimmer vessel owned by MMSD. The system proposed by Aquarius is similar to Mr. Trash Wheel, but uses solar panels and electric motors to drive the conveyer. If awarded funding, we will be poised to convene a project team, award a contract, and move forward.

Figure 3: Aquarius Conceptual Design

Ex. 4

Ideal Location, Owned by a Partner Agency: The device will be installed at river frontage owned by MMSD. The parcel is about 1.25 acres, with about 280 feet of shoreline. This location is situated just upstream of the end of navigable waters, to ensure the installed device does not have a negative impact on commercial and recreational watercraft. The site is 2 miles upstream of Lake Michigan. This location is downstream of 80% of the length of the Kinnickinnic River, giving it the opportunity to catch more trash than if it was located further upstream. Most of the land between the site and the mouth of the river is used for industrial port activities. MMSD owns sewer infrastructure on the upland portion of the site, but is willing to facilitate the construction of necessary river access, in the form of a ramp and concrete pad for the dumpster. HDI will also design public access at the site that will facilitate safe appreciation of the device, while keeping it and MMSD's infrastructure secure. This public access will be part of the Milwaukee Riverwalk system, connecting to a larger network of publicly accessible waterfront throughout the Harbor District.



Figure 4: Site maps

Existing Partnership for Ongoing Operations: The ongoing operations and maintenance for the device - during and beyond the grant period - will be undertaken through a partnership, similar to the successful partnership that has operated the Lynyrd Skymmr for many years. The device will be equipped with a monitoring system and networked camera that will enable monitoring of the dumpster levels, as well as for jams or other malfunctions. The City of Milwaukee Department of Public Works (DPW) has agreed to dispose of collected trash when the dumpster is full. The local Business Improvement District (BID) will hire a contractor with responsibility for promptly resolving any malfunctions that cause the device to stop working. Routine maintenance tasks like greasing bearings and cleaning equipment will also be contracted. The device will be decommissioned, lifted from the water for winter to protect it from ice damage, and stored at MMSD's adjoining property. This will also provide an opportunity to inspect and repair any damaged components.

Outreach and Education Opportunities: Strong existing partners offer a wonderful opportunity to use the device as the centerpiece of an education campaign without creating new infrastructure. See Outreach and Education section below.

Implementation Timeline

HDI will convene a project team composed of HDI staff, MMSD, DPW, and neighboring landowners. The project team's responsibilities will include selecting and contracting the firm to construct the device, design review, and ensuring successful project completion. They will also identify needs related to ongoing operations and maintenance of the device and formulate strategies for meeting them.

Date	Project Activities	Responsible Party
September 2020	Complete fundraising. Convene project team.	HDI HDI
Oct-Dec 2020	Award contract for design and fabrication. Begin device design.	HDI Contractor A
Jan-Mar 2021	Finalize device design Begin Chapter 30 permit with Wisconsin DNR and applicable Army Corps permits Develop educational/promotional materials Convene public workshop for site planning	Contractor A HDI HDI, MRK, SSCHC & Contractor B HDI
Apr-Jun 2021	Launch education/engagement campaign Complete site improvement design	HDI, MRK, SSCHC & Contractor B HDI & MMSD
Jul-Sept 2021	Complete site improvements	MMSD

Oct-Dec 2021	Begin construction of trash collector. Convene public workshop for trash wheel Plan & create web infrastructure	Contractor A HDI Contractor B
Jan-Mar 2022	Education and engagement activities Promotion/media campaign	HDI, MRK, SSCHC Contractor B
April 2022	Install trash collector Event in coordination with MRK Spring Clean-up	HDI, Contractor A All partners
May-Sept 2022	Operation, monitoring, troubleshooting Education and engagement activities	HDI, Contractor A HDI, MRK, SSCHC
Oct-Nov 2022	Compile 1st season results, submit final report	HDI

RESULTS - OUTPUTS AND OUTCOMES

Outputs

1. *Installation of permanent interceptor device that will capture trash from 16,000 acre watershed / 8 miles of river.*

The device location relatively near the mouth of the river ensures that the vast majority of trash generated in this watershed will be captured.

2. *16,000 Total acres improved by in-stream trash removal.*

This is the area of the Kinnickinnic River watershed.

3. *Long-term commitments for continued operation and maintenance of the interceptor.*

Local partners have already indicated a willingness to support ongoing operation beyond the grant period.

4. *75 tons of trash collected per year.*

Estimate from Clearwater Mills LLC. This firm has experience installing four trash collection devices and the estimate seems accurate. Will be measured by the amount of trash collected and disposed.

5. *500-1,000 people attend event to celebrate launch, in coordination with MRK Spring Clean-up.*

MRK's Spring Clean-Up is the largest volunteer event in the state. A post-clean-up party brings volunteers together each year. For 2020, we will combine the post-party with the launch of the device. Attendee estimate based on past events.

6. *Launch generates 200,000 social media "hits".*

Estimate based on other social media generated by MRK; measured by number of hits.

7. *Device maintains a social media following of 15,000 people across various platforms.*
Estimate based on following for Mr. Trash Wheel; measured by number of followers.

8. *Educational programming reaches 500 students annually.*
Based on existing programming of HDI, MRK, and SSCHC.

Outcomes

1. Protect and restore communities of native aquatic and terrestrial species important to the Great Lakes by reducing the impacts of human activities such as trash, litter, and debris.
2. Model effective and efficient trash collection strategy for other Great Lakes cities. This device will be more effective and efficient than mobile trash collection boats. Demonstrate that existing technologies can be effectively employed for this purpose.
3. Improve perception of the Kinnickinnic River. Perceptions will be measured by surveys conducted at pre-project public informational meetings and online.
3. Increase awareness of the problems caused by floating trash. Will be measured by the number of people reached by outreach and educational programming.

In addition to reporting requirements for EPA funding, HDI will compile annual reports quantifying trash collection device's performance. Information will include the mass of trash collected, correlation with observed precipitation patterns, operations and maintenance costs and activities, and number of people reached through outreach efforts. Reports will be disseminated on HDI's website and at conferences and presentations.

Timeline of Major Milestones

October 1, 2020	All funds committed
November 1, 2020	Contract awarded for design and fabrication.
June 1, 2021	Site design complete
September 1, 2021	Site work complete
October 1, 2021	Permit received
February 1, 2022	Website and social media live
March 15, 2022	Device construction complete
April 15, 2022	Device installed
July 1, 2022	Training, commissioning, adjustments complete
October 15, 2022	Submittal of final report
Ongoing	Compilation of annual performance reports quantifying impact
Ongoing	Outreach and Education

Project Relevance

This project supports GLRI's Action Plan III Focus Area 4: Habitats and species Objective 4.1: Protect and restore communities of native aquatic and terrestrial species important to the Great Lakes by reducing the "impacts of human activities such as trash, litter, and debris". The project is relevant to Objective 4.1 in that it helps to limit the impact of trash pollution in the Kinnickinnic River and Lake Michigan. By collecting and disposing of floating trash, the project

prevents harmful impacts on aquatic habitat due to light and oxygen levels and also reduces the chemical impacts of persistent bioaccumulative toxins on wildlife.

The project is relevant to FY 2018-22 EPA Strategic Plan Goal 1: Core Mission Objective 1.2: Provide for Clean and Safe Water in that it mitigates trash in the water. Visible, floating trash has a large impact on the public's perception of the cleanliness of water. Collection of floating trash will make the Kinnickinnic River and Milwaukee's Inner Harbor safer -and more appealing - for canoes, kayaks, and other small craft. By encouraging people to recreate on the rivers, we create a constituency of stakeholders who will advocate for and protect clean water.

PROGRAMMATIC CAPABILITIES AND PAST PERFORMANCE

Organization Experience and Capacity

As the community organization charged with revitalizing Milwaukee's industrial waterfront, HDI has extensive experience with complex, multi-partner projects that bring many unknowns. Our team of five has worked with local property owners and government agencies at all levels to plan and implement improvements for our area. Recent successes include:

Harbor View Plaza: HDI built a new public plaza with a unique play structure and fountain on the waterfront. The organization secured a long-term lease for the site from the City of Milwaukee; raised \$1.5 million in funding; secured long-term maintenance commitments; managed design, construction, and installation of all elements; and executed related marketing, outreach and public events.

Harbor Riverwalk: HDI has spearheaded efforts to create a publicly accessible, continuous waterfront walkway in our district. We obtained property owners' support resulting in City adoption of a zoning overlay for that purpose. We raised funds for and partnered with the City in creation of design standards for the walkway – including considerations like stormwater management, terrestrial and aquatic habitat, planting of native trees, and covered trash receptacles.

Relevant/Comparable Federally-Funded Assistance Agreements:

HDI has not received any previous funding awards from EPA or GLRI. Following are a selected list of other awards received that are comparable in size or scope, or where the source included federal funds although the grant was not administered by a federal agency.

<u>Project Name</u>	<u>Funder</u>	<u>Date</u>	<u>Amount</u>
Grand Trunk Wetland Stormwater Engineering	Wisconsin Coastal Management Program (funded by NOAA)	8/9/2018	\$26,970

Project Management and Completion: HDI is partnering with the City of Milwaukee to restore a wetland. Initial phases of this grant were completed on schedule. However, discovery of PCB contamination in an area of the site that was not previously implicated has delayed the final phase, preparation of construction documents.			
Reporting: The project met early milestones and reporting requirements. City of Milwaukee is preparing a remediation strategy and permitting for the PCB contamination. Our funder granted a six month extension and we anticipate completing the grant and filing all reports in accordance with the extension.			
Harbor View Plaza	Rockwell Automation Foundation City of Milwaukee	3/9/2018	\$600,000 \$300,000
Project Management and Completion: Total project cost was \$1.5million.			
Reporting: Required reports were submitted on schedule.			
Habitat Hotels	National Fish and Wildlife Fdn.	11/28/17	\$44,837
Project Management and Completion: HDI successfully completed all aspects of this grant. We partnered with a local technical high school to build innovative fish habitat for our urban waterfront, and with local property owners to install the habitat on their dockwalls. Based on the success of this pilot, we are exploring expansion of the project.			
Reporting: The project has achieved its expected outputs. Reports were submitted according to schedule and accepted by the funder.			

Ex. 6 Key Team Members:

██████████ is the founding Executive Director of Harbor District, Inc. With her leadership, in its first five years the organization has led an award-winning comprehensive planning process, planned and built a new public plaza, raised and managed over \$5,000,000 in grant funding, launched community events, built partnerships with environmental and community organizations, businesses, and government agencies, and established a recognized name for a previously neglected part of Milwaukee.

Ex. 6 [REDACTED] is Natural Environment Program Manager at Harbor District, Inc. He has worked in environmentally focused nonprofit organizations since 2012, managing projects including brownfield-to-greenspace construction, habitat restoration, and public access. This work includes conducting community outreach, fundraising, and managing consultants.

Ex. 6 [REDACTED] is a real estate developer and property owner on the Kinnickinnic River, and a member of the Board of Directors of HDI. He was instrumental in the creation of Business Improvement District 35, which brought property owners together to provide local cost share for a Great Lakes Legacy Act clean-up of contaminated sediments in the Kinnickinnic River.

Additionally, we will be supported by the project team, with representatives from MMSD, DPW, MRK, and SSCHC.

OUTREACH AND EDUCATION

HDI will partner with Milwaukee Riverkeeper (MRK) and Sixteenth Street Community Health Centers Department of Environmental Health (SSCHC) for implementation of outreach and education activities. Collaboration with community partners like MRK and SSCHC will add efficiency by building from established education and outreach programs and structures. HDI will not need to build relationships from scratch but can capitalize on existing community connections. All of our partners will further contribute to the project effectiveness by spreading awareness through their participation. Our outreach and education strategies for this project focus on three key areas:

- Broad-based education about water quality and trash impacts in Milwaukee;
- Building support and excitement within our neighboring community;
- Information sharing with other communities about this solution to trash.

Broad-based Education about Water Quality and Trash Impacts

Baltimore's Mr. Trash Wheel provides an outstanding model for how to use a trash device to garner public attention for water quality issues. The social media "persona" created for Mr. Trash Wheel has a devout following of 20,000 on Twitter, and the efforts to build a second, and then third, trash wheel were supported by very successful crowd-funding campaigns. The project budget includes funds to hire a contractor who will develop a website and associated social media presence for the project. A camera on the device will provide a live stream of trash collection, which will help not only in monitoring performance but engaging the public. MRK's successful "Adopt-a-River" program provides one way to generate social media for the project. Individuals or groups adopt a section of river and conduct cleanups of their section on a regular basis. Currently, there are over 75 adopters cleaning up and removing trash from the waterways. As part of that program, and this project, MRK would include the option of an adopter cleaning up and adopting the interceptor for a period of time. This would rotate among adopters, to bring more people down to the site, engage more people with the project (e.g., take a picture to post on social media), and help maintain the site by removing any nuisance trash or large debris that the interceptor can't collect.

MRK's Education & Outreach Coordinator will work with Harbor District staff to create a trash collector lesson plan that can be included with Harbor District and Milwaukee Riverkeeper's existing lessons on watersheds, harbor history, water quality, etc. This lesson will

help students understand how much trash is found in our rivers annually, where this trash comes from, and action items students can take to make a difference. It will also include information on the damage that trash, and single-use plastic trash in particular, has on human and ecosystem health, and how keeping trash out of our waterways is beneficial for humans and wildlife alike.

MRK is also working with Plastic Free MKE, a movement of volunteers, nonprofits, government agencies and businesses working to eliminate single-use plastics from Milwaukee, to create a new lesson plan and student toolkit that focuses on the problem with single-use plastics in our environment, and how students, as the next generation of consumers, can begin to make choices and take actions to reduce the amount of plastics used in our communities. This lesson plan will also include information on the trash interceptor.

Finally, Wisconsin Hero Outdoors, a 501c(3) that works to connect veterans, first responders and their families to outdoor activities in Wisconsin will collaborate with MRK and HDI to further advance the outreach and education around nuisance trash and the value of the trash interceptor. Wisconsin Hero Outdoors supports over 13,000 veterans and first responders in the Greater Milwaukee Area. This group is passionate about the conservation and protection of our natural resources and educates audiences on the impacts our waterways face with trash and single-use plastics. MRK staff will work with Wisconsin Hero Outdoors to create presentations and informational materials for local veterans and first responders, and will schedule trash cleanups with members and their families to reduce the amount of trash entering our Harbor and Lake Michigan.

Building Support and Excitement in our Neighboring Community

As described above, the Kinnickinnic River watershed has significant environmental justice issues. Trash, both in the river and on land, are a visible symbol of a neglected environment. Unlike the Milwaukee and Menomonee Rivers, the Kinnickinnic does not pass through affluent suburban neighborhoods. As a result, it is often a forgotten watershed within the city. By making this watershed the one to receive an exciting new investment, we have an opportunity to catalyze a greater sense of pride and ownership of the river in neighbors and businesses, resulting in behavioral shifts. This project will not solve all the environmental justice issues in the Kinnickinnic watershed, but it will address an easily recognizable problem and will be part of the collective impact of other Kinnickinnic River improvement projects.

SSCHC's Department of Environmental Health (DEH) will assist the effort by conducting outreach activities and integrating materials about trash into existing environmentally-focused educational programming. SSCHC works primarily with the community upstream of the installation site, where residents are majority Latinx. They are well established and integrated into the fabric of the community and successfully lead community engagement efforts. Additionally, SSCHC-DEH has well established educational programs, both in-school and after-school, at elementary schools within the Kinnickinnic River watershed. SSCHC staff will integrate information about the Trash Wheel project into their lesson plans. Lastly, they will assist with the production of Spanish language materials about the project and help promote it at community meetings in the neighborhoods in which they work.

HDI's education program partners with five schools within two miles of the Harbor each year. Most of these students live within the Kinnickinnic River watershed, and the lesson will highlight the fact that each student has the potential to directly impact their river every day. When possible, HDI staff will incorporate a field trip stop at the trash interceptor so students can

see firsthand the amount of trash in the river and how the trash interceptor works to help keep the Kinnickinnic River and the Harbor trash free.

Finally, MRK and HDI will work with other community stakeholders and partners to reach a wider audience in the Kinnickinnic River watershed. This effort will include giving presentations and tabling at events to inform community members about the trash collector, its impact on the Harbor and Lake Michigan, and how everyone can play a role in reducing the amount of trash that enters our waterways, as well as working with partners to translate the Trash Fish lesson plan and informational materials into Spanish and other languages for the diverse community that resides in the Kinnickinnic River watershed.

These education and outreach activities will help to ensure a successful project by engaging all the diverse parts of the local community in achieving project goals. The broad array of partnerships greatly increases efficiency. Utilization of MMSD property obviates the need to purchase a site for installation. City of Milwaukee DPW's commitment to dispose of collected trash brings efficiency and cost savings to the project.

Information Sharing with Other Communities

We believe that the project has a high potential for transferability to other cities with trash problems in river estuaries. Upon completion of the project and the first and all subsequent years of operation, HDI will prepare an annual report of the device's performance, reporting metrics related to the outputs described above as well as operating costs. Analysis of these results will focus on outputs and cost-effectiveness, which will be shared within the local, state, and Great Lakes communities through conference presentations and our website. HDI will apply to present at a number of local and regional conferences, including the Southeastern Wisconsin Watersheds Trust Clean Rivers, Clean Lake Conference; EPA's Great Lakes Area of Concern Conference; Healing Our Waters' Great Lakes Coalition Conference; and the Great Lakes and St. Lawrence Cities Initiative Conference.

3. MEETINGS/CONFERENCES/WORKSHOPS

HDI will host two public informational meetings. HDI will initiate the meetings and coordinate with partner community and governmental groups to engage the public to attend. Meetings will be advertised through several channels. Electronic outreach will be performed through HDI email mailing lists, social media (facebook, instagram, linkedin), and by sharing with partnering and aligned organizations (Milwaukee Riverkeeper, SSCHC, MMSD, City of Milwaukee, KK River Neighbors in Action) to promote on their email and social media systems. Hardcopy flyers will also be posted at physical locations of these organizations and at key community gathering locations. HDI will also use existing groups like our Neighborhood Advisory Council and the Business Improvement District to reach people. HDI will follow recommended guidelines for social distancing due to the COVID-19 pandemic. If necessary, meetings will be held online. The meetings will present materials in English and Spanish and offer an opportunity to comment on concepts and ideas for the trash collection system. The target audiences for the meetings would be nearby residents and business owners, marinas and water-dependent business along the Kinnickinnic River and Inner Harbor, and recreational boaters. An estimated breakdown of attendees is 5% state staff, 15% local government, 80% public participants. Presentations given will be posted online for access after the meeting. No income

will be generated or fees charged. Promotional materials will contain logos for HDI, EPA, GLRI, MRK, MMSD, City of Milwaukee, and SSCHC.

4. PERMITS AND ENVIRONMENTAL AND REGULATORY COMPLIANCE

HDI has consulted with the Wisconsin DNR and the US Army Corps of Engineers regarding applicable permitting requirements. We will obtain a Chapter 30 individual permit for a miscellaneous structure from DNR and will comply with any additional permitting requirements required by DNR and the Army Corps. We have scheduled six months between completion of design and the beginning of construction to allow for review and study by the permitting authorities, as well as possible design modifications, so that permitting does not become a delaying factor in the project.

1. Will your project have collateral adverse impacts to the surrounding environment (*i.e.* soil [dust], air, water [quality and quantity], animal habitat, etc.)?

No. The project will not have negative impacts on soil, air quality, water quality or quantity, or animal habitat.

2. Endangered Species: Are you aware of any federally-listed endangered or threatened species or any designated critical habitat of such species in the project area? If so, describe whether your project may affect those listed species. In what way? Please include all possible effects.

Northern Long-eared bat is listed in the US Fish and Wildlife IPAC system for the project site. It is not known to be within the City of Milwaukee. In 2019, we conducted bat surveys on the Kinnickinnic River and in the Inner Harbor and did not find any northern long-eared bats. We do not anticipate the project affecting the species. There are no critical habitats located at the project site.

3. There are no wetlands in the project boundaries.

4. There are no historic properties in the project boundaries.

5. BUDGET AND BUDGET NARRATIVE

		EPA	Match	Total
	Total Personnel			
1	Executive Director: 24 months at 5% FTE			
2	Project Manager: 24 months at 15% FTE			
3	Community Engagement Spec.: \$16/hr x 5 hr/wk x 52 wks			

Ex. 4

Ex. 4

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	Total Fringe Benefits	██████████	██████████	██████████	Ex. 4
4	13% of Salary and Wages	██████████	██████████	██████████	Ex. 4
	Total Travel	\$0	\$0	\$0	
	Total Equipment	██████████	██████████	██████████	Ex. 4
5	Trash Collection Device Construction and Delivery	██████████	██████████	██████████	Ex. 4
6	Booms for Trash Collection	██████████	██████████	██████████	Ex. 4
	Supplies	\$300	\$0	\$300	
7	Public Informational Meeting Supplies x 2 Meetings	\$300		\$300	
	Total Contractual Costs	██████████	██████████	██████████	Ex. 4
8	Installation of Piles & Anchoring System		██████████	██████████	Ex. 4
9	Electrical Supply: Land Hookup for Backup Power Source	██████████	██████████	██████████	Ex. 4
10	Web and Social Media Design and Execution	██████████	██████████	██████████	
11	First Season Operations and Maintenance	██████████	██████████	██████████	Ex. 4
12	First Season Trash Removal	██████████	██████████	██████████	Ex. 4
13	Installation of Device	██████████	██████████	██████████	Ex. 4
14	Site Improvements	██████████	██████████	██████████	Ex. 4
	Total Other Direct Costs	██████████	██████████	██████████	Ex. 4
14	Subaward to Milwaukee Riverkeeper	██████████	██████████	██████████	Ex. 4
15	Subaward to Sixteenth Street Community Health Center	██████████		██████████	Ex. 4
	Indirect Costs	██████████	██████████	██████████	Ex. 4

	Total	\$492,300	\$211,089	\$703,389
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Detailed Description of Budget Line Items

Personnel Costs and Fringe Benefits:

Funding for these costs will be provided by the applicant through a voluntary cost-share. The applicant has funds secured for these costs.

1. Executive Director: HDI's executive director will provide project oversight, contract management for EPA grant, and secure additional funding commitments for the ongoing operation and maintenance of the device beyond the two years of the project.
2. Project Manager: HDI's Natural Environment Program Manager will provide the day-to-day management of the effort, including leading project team, coordinating with the device contractor and other partners, site planning, procurement of contractual items, management of sub-awards, communications, and trouble-shooting.
3. Outreach: HDI's Community Engagement Coordinator will inform and engage our local neighbors and property owners beginning in Year 2 of the project.
4. Fringe Benefits: Employer's share of payroll taxes and benefits.

Equipment

5. Trash Collection Device: The estimate is based on competitive proposals from two qualified firms. Matching funds will be secured through local sponsorships to be raised by the applicant. If we are unsuccessful in securing sponsorships, we have a commitment from the Fund for Lake Michigan to provide the balance of funds; see attached Letter of Support.
6. Booms for Trash Collection: The estimate is provided by Clearwater Mills based on their experience with booms for a similar device in Baltimore, MD. Matching funds will be provided by the Fund for Lake Michigan; see attached Letter of Support.

Supplies

7. Supplies: Costs for promotional and display materials for two informational meetings.

Contractual

8. Piles and Anchoring System: The estimate was provided by Michels Corp, a locally based construction firm. Matching funds will be provided by the Fund for Lake Michigan; see attached Letter of Support.
9. Electrical Supply: Cost to hook up to a land-based power supply as a back-up to the solar panels, based on an estimate from We Energies, Milwaukee's electrical utility.
10. Web and Social Media: Includes set-up of a livestreaming web camera on the device which will be used both for remote monitoring of the device and for social media engagement; a website; and creation and launch of social media campaign.
11. Operations, Troubleshooting and Routine Maintenance: This will cover the first season of operation for the device. Cost based on estimates from our two potential providers of the device. Matching funds will be provided by BID 51; see attached LOS.
12. Trash Removal: This will cover the first season of operation for the device. Cost based on estimates from Clearwater Mills for their device in Baltimore. In-kind trash removal

will be provided by the City of Milwaukee Department of Public Works; see attached LOS.

13. Installation of Device: Based on estimate provided by Clearwater Mills. HDI will pursue an in-kind donation of this service; if unsuccessful, matching funds will be provided by the Fund for Lake Michigan, see attached LOS.
14. Site Improvements: Grading, fencing, and installation of a pad for the dumpster on MMSD's adjoining property. Estimate provided by GRAEF Engineering. MMSD has indicated that they are committed to providing these improvements; see attached Letter of Support.

Other

15. Sub-Award to Milwaukee Riverkeeper: MRK is a private non-profit organization and an eligible applicant as described under section III.2 of the RFP. The organization will perform outreach and education tasks.
16. Sub-Award to Sixteenth Street Community Health Centers: SSCHC is a private non-profit organization and an eligible applicant as described under section III.2 of the RFP. The organization will perform outreach and education tasks.

Expeditious Spending and Sufficient Progress in the Use of GLRI Funds:

HDI has queued up the aspects of this project to be able to begin work promptly when a grant commitment is received.

Quarter 1 of Grant Period: Our project team will select a supplier and finalize a contract;

Q2: Grant funds will be used for required first installment payment to begin work on device. Simultaneously (with match funds) we will begin design of the adjoining site.

Q3-4: Progress payments made on production of device. Site improvements made with match funds.

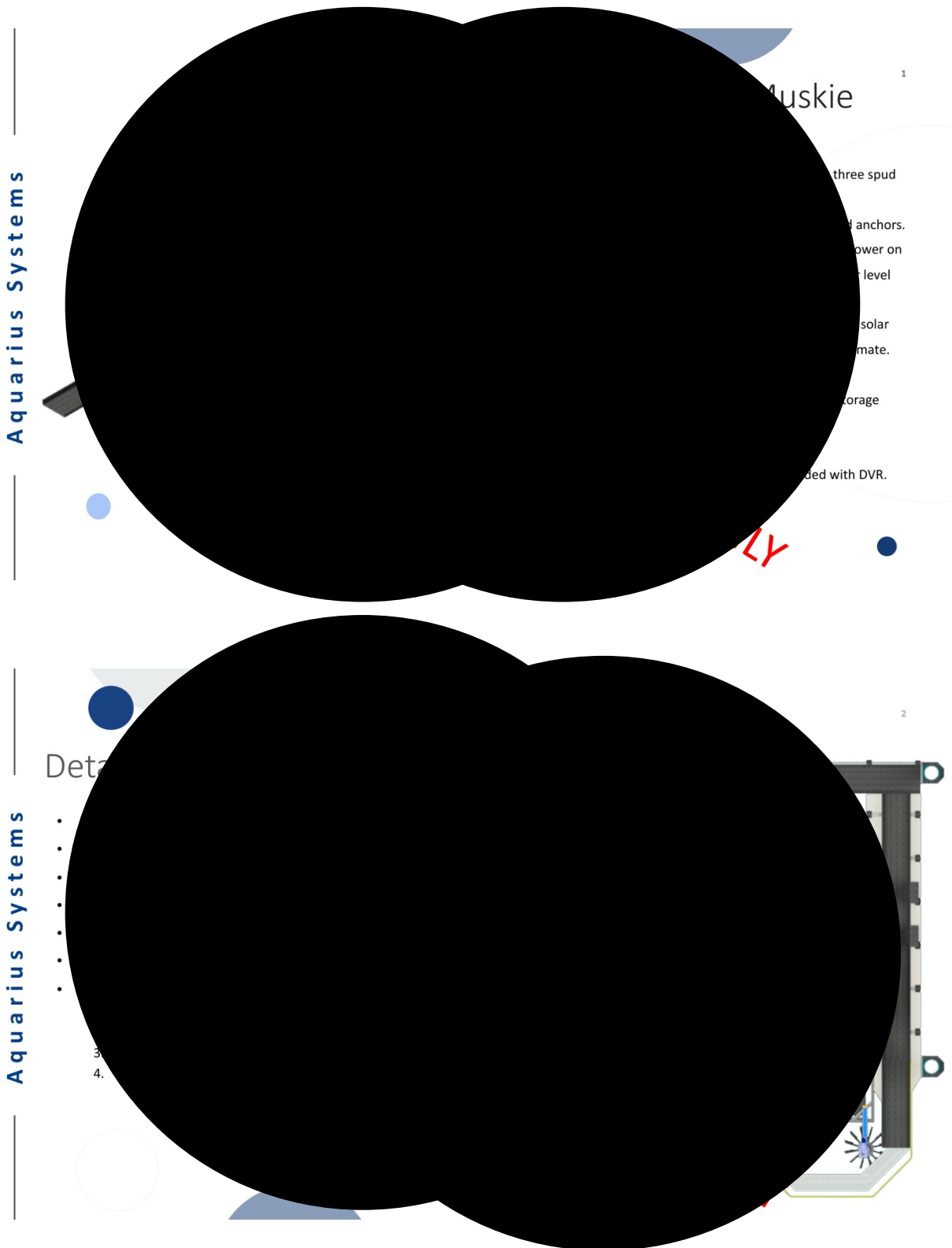
Year 2, Q1-2: Final payments made on device construction and all remaining grant funds expended for outreach activities and site preparation work.

Q3-4: Monitoring and operation of the device.

Oversight of Grant Funds and Internal Controls:

HDI has experience managing projects of this scope and complexity with multiple funding sources and varying funder requirements. Grant expenditures are tracked by program area and project in the organization's accounting system, and by individual funding source in separate spreadsheets. Expenditures are reviewed and approved by a program manager and the executive director, with expenditures above \$10,000 requiring an Officer's signature. Financial statements are prepared by an independent bookkeeper and reviewed monthly by the Board Treasurer and bimonthly by the Board of Directors. The financial statements are audited annually by a Certified Public Accountant.

Appendix A: Conceptual Designs

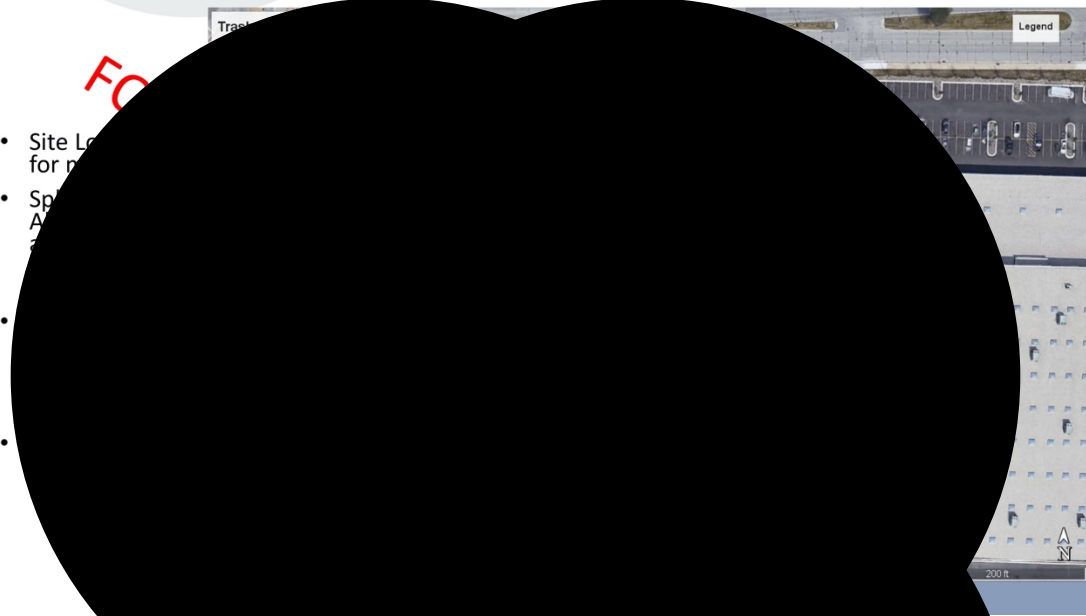


Aquarius Systems

- Site Location for new
- Spacing of Aquarius Systems
-
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D e t a i l D e s i g n

3



Aquarius Systems

Pi

